What is claimed is:

1. An apparatus for spin forming a portion of a workpiece where the formed portion has a formed axis that is non-coaxial with the non-processed axis of the workpiece, comprising:

a carrier rotatable about a spin axis;

at least a first roller and a second roller operatively supported on said carrier, said first roller being radially and axially offset from said second roller, said first and second rollers radially movable toward and away from the spin axis;

a rotational drive mechanism for spinning said carrier about a spin axis;

a radial drive mechanism for radially translating said first roller and said second roller toward and away from the spin axis;

a fixture for constraining the workpiece;

a pivoting mechanism for rotating one of said carrier or workpiece about a pivot point, from a first angular position to a second angular position, during a forming operation to create a formed axis that is non-coaxial with the non-processed axis of the workpiece; and

an axial drive mechanism for reciprocating one of said first and second rollers or workpiece along a spin axis to sequentially engage said first roller and then said second roller to the workpiece where said first roller and said second roller sequentially reduce the diameter of a portion of the workpiece during a forming pass.

2. The apparatus of claim 1, wherein said pivoting mechanism causes one of said carrier or workpiece to pivot at least once.

3. The apparatus of claim 1, wherein said pivoting mechanism causes one of said carrier or workpiece to pivot between forming passes.

4. The apparatus of claim 1, wherein said pivoting mechanism causes one of said carrier or workpiece to pivot within a plane containing the spin axis.

5. The apparatus of claim 1, wherein said pivoting mechanism pivots said fixture constraining the workpiece, said pivoting mechanism having an actuator pivotally attached to said fixture for rotating said fixture about a pivot point.

6. The apparatus of claim 5, wherein said actuator is a programmable actuator.

7. The apparatus of claim 1, further comprising a programmable controller, said controller operatively coupled to at least said radial drive mechanism, said

pivoting mechanism and said axial drive mechanism to govern a forming operation to form a portion of the workpiece.

8. The apparatus of claim 6, wherein the formed axis is non-linear.

9. The apparatus of claim 1, wherein the pivot point is fixed relative to the workpiece.

10. A method of spin forming a portion of a workpiece where the formed portion has a formed axis that is non-coaxial with the axis of the non-processed portion of the workpiece, comprising the steps of:

spinning at least a first roller and second roller about a spin axis where the first roller is radially and axially offset from the second roller;

commanding the first roller and second roller to translate radially toward and away from the spin axis to position the rollers for a forming pass;

rotating one of the rollers or workpiece about a pivot point from a first angular position to a second angular position during a forming operation; and

commanding a forming pass, wherein one of the rollers or workpiece travel along the spin axis to engage the first roller and then the second roller to the workpiece to sequentially reduce the diameter of a portion of the

workpiece to create a formed portion having a formed axis that is non-coaxial with the non-processed axis of the workpiece.

11. The method of claim 10, wherein the formed axis is non-linear.

12. The method of claim 10, wherein one of the rollers or workpiece is rotated about a pivot point more than once during a forming operation.

13. The method of claim 10, wherein one of the rollers or workpiece is rotated about a pivot point prior to a subsequent forming pass.

14. The method of claim 10, wherein one of the rollers or workpiece is rotated about a pivot point within a plane containing the spin axis.

15. The method of claim 10, wherein the rotation of the rollers or workpiece about a pivot point is controlled to form a substantially curved formed portion.